



Ontario

Ministry of
Natural
Resources

Hon. Alan W. Pope
Minister

John R. Sloan
Deputy Minister

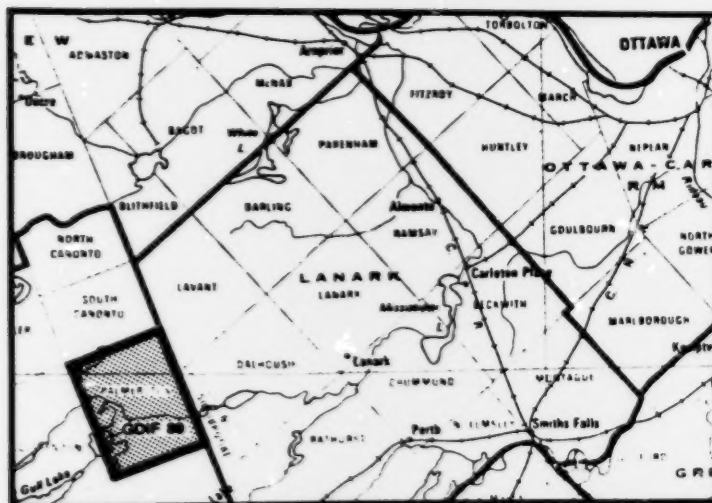
ONTARIO GEOLOGICAL SURVEY
GEOLOGICAL DATA INVENTORY FOLIO

GDIF 89

PALMERSTON TOWNSHIP

FRONTENAC COUNTY

Compiled by the Staff of
the Resident Geologist's Office,
Tweed



LOCATION MAP

Scale 1:1 013 760 or
1 inch to 16 miles

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ACCOMPANYING MAPS

Property Location Map - 1 map

Exploration Data Map - 1 map

Map Scale 1: 31 680 or 1 inch to ½ mile

CONVERSION FACTORS FOR MEASUREMENTS IN ONTARIO GEOLOGICAL SURVEY PUBLICATIONS

If the reader wishes to convert imperial units to SI (metric) units or SI units to imperial units the following multipliers should be used:

CONVERSION FROM SI TO IMPERIAL

SI Unit	Multiplied by	Gives
1 mm	0.039 37	inches
1 cm	0.393 70	inches
1 m	3 280 84	feet
1 m	0.049 709 7	chains
1 km	0.621 371	miles (statute)

CONVERSION FROM IMPERIAL TO SI

Imperial Unit	Multiplied by	Gives
1 inch	25.4	mm
1 inch	2.54	cm
1 foot	0.304 8	m
1 chain	20 116 8	m
1 mile (statute)	1.609 344	km

LENGTH

1 mm	0.039 37	inches	1 inch	25.4	mm
1 cm	0.393 70	inches	1 inch	2.54	cm
1 m	3 280 84	feet	1 foot	0.304 8	m
1 m	0.049 709 7	chains	1 chain	20 116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	1.609 344	km

AREA

1 cm ²	0.155 0	square inches	1 square inch	6.451 6	cm ²
1 m ²	10 763 9	square feet	1 square foot	0.092 903 04	m ²
1 km ²	0.386 10	square miles	1 square mile	2 589 988	km ²
1 ha	2 471 054	acres	1 acre	0.404 685 6	ha

VOLUME

1 cm ³	0.061 02	cubic inches	1 cubic inch	16.387 064	cm ³
1 m ³	35 314 7	cubic feet	1 cubic foot	0.028 316 85	m ³
1 m ³	1.308 0	cubic yards	1 cubic yard	0.764 555	m ³

CAPACITY

1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	4.546 090	L

MASS

1 g	0.035 273 96	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 75	ounces (troy)	1 ounce (troy)	31.103 476 8	g
1 kg	2.204 62	pounds (avdp)	1 pound (avdp)	0.453 592 37	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	907.184 74	kg
1 t	1.102 311	tons (short)	1 ton (short)	0.907 184 74	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	1016.046 906 8	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	1.016 046 906 8	t

CONCENTRATION

1 g/t	0.029 166 6	ounce (troy)/ton (short)	1 ounce (troy)/ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ton (short)	1 pennyweight/ton (short)	1 714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

1 ounce (troy)/ton (short)	20.0	pennyweights/ton (short)
1 pennyweight/ton (short)	0.05	ounce (troy)/ton (short)

One gram (g) per tonne is equivalent to one part per million (1 ppm).

NOTE—Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries published by The Mining Association of Canada in co-operation with the Coal Association of Canada.

DATA SOURCES CHECK LIST

NOTE: The following sources have been searched to compile the data for this map. If no reference data was found, the appropriate box is marked 'no'; if reference was found, the box is marked 'yes'.

All reference data found are included in the following pages. If the box is blank, the data source has not yet been searched. If the box is marked N.A., the source item is Not Applicable to this area and therefore not searched.

SOURCES OF DATA		Data	Initial
1	Resident Geologist's Office Files	Yes	J.E.
2	Assessment Files Research Office, Toronto	Yes	J.E.
3	ODM General Index: 7 volumes	Yes	J.E.
4	Catalogue of Airborne Geophysical Surveys (ODM)	Yes	J.E.
5	ODM Mineral Resources Circulars and OGS Mineral Deposits Circulars	Yes	J.E.
6	ODM Industrial Mineral Reports	Yes	J.E.
7	Bibliography of Post Precambrian Theses - Karrow (ODM MP 1)	N.A.	J.E.
8	Bibliography of Precambrian Theses - Ginn (ODM MP 2)	N.A.	J.E.
9	Newspaper Clippings File	Yes	J.E.
10	GSC Index to Publications	Yes	J.E.
11	OGS Index to Published Maps and Reports - MP 77 and Supplements to MP 77	Yes	J.E.
12	OGS Index Maps	Yes	J.E.
13	Source Mineral Deposit Records (O.G.S.)	Yes	J.E.
14	Author - Subject Articles File	N.A.	J.E.
15	Miscellaneous Papers: ODM & OGS	No	J.E.
16	ODM Geological Circulars: OGS Study Series	Yes	J.E.
17	ODM Preliminary Reports: ODM Bulletins	Yes	J.E.
18	ODM - OGS Open File Reports	Yes	J.E.
19	OGS Northern Ontario Engineering Geology Terrain Studies	N.A.	J.E.
20	OGS Aggregate Resources Inventory Papers	N.A.	J.E.
21	OGS Mineral Potential Maps	Yes	J.E.
22	Aerial Photographs on file, Tweed	Yes	J.E.

METALS AND MINERALS REFERENCES LIST

Δ anh	..Anhydrite	Δ fu	..Fuchsite	Δ Ni	..Nickel	Δ st	..Stone
Δ ank	..Ankerite	Δ gn	..Galena	Δ Nb	..Niobium	Δ taic	..Talc
Δ anna	..Annabergite	Δ gt	..Garnet	Δ Pd	..Palladium	Δ Te	..Tellurium
Δ ap	..Apatite	Δ goe	..Goethite	Δ peat	..Peat	Δ td	..Tetradrite
Δ arg	..Argentite	Δ Au	..Gold	Δ pent	..Pentlandite	Δ th	..Thorite
Δ As	..Arsenic	Δ gf	..Graphite	Δ Pt	..Platinum	Δ Th	..Thorium
Δ asp	..Arsenopyrite	Δ gl	..Gravel	Δ py	..Pyrite	Δ thuc	..Thucholite
Δ asb	..Asbestos	Δ gyp	..Gypsum	Δ pyl	..Pyrochlore	Δ ti	..Titanite
Δ ba	..Barite	Δ hem	..Hematite	Δ pyrl	..Pyrolusite	Δ Ti	..Titanium
Δ be	..Beryl	Δ il	..Ilmenite	Δ po	..Pyrrhotite	Δ tour	..Tourmaline
Δ Bi	..Bismuth	Δ Fe	..Iron	Δ q	..Quartz	Δ trap	..Trap rock
Δ bn	..Bornite	Δ IF	..Iron Formation	Δ qcv	..Quartz carbonate vein	Δ W	..Tungsten
Δ bran	..Brannerite	Δ jas	..Jasper	Δ ra	..Radioactive minerals	Δ uran	..Uraninite
Δ bruc	..Brucite	Δ kaol	..Kaolinite (kaolin)	Δ RE	..Rare Earths	Δ U	..Uranium
Δ Cd	..Cadmium	Δ ky	..Kyanite	Δ sd	..Sand	Δ verm	..Vermiculite
Δ calc	..Calcite	Δ Pb	..Lead	Δ sgl	..Sand and gravel	Δ Y	..Yttrium
Δ carb	..Carbonate	Δ lim	..Limonite	Δ ss	..Sandstone	Δ Zn	..Zinc
Δ cel	..Celestite	Δ Li	..Lithium	Δ scap	..Scapolite	Δ zr	..Zircon
Δ cc	..Chalcocite	Δ mgst	..Magnesite	Δ shee	..Scheelite	Δ str	..Strontianite
Δ cp	..Chalcopyrite	Δ mag	..Magnetite	Δ serp	..Serpentine	Δ trem	..Tremolite
Δ ch	..Chert	Δ mc	..Malachite	Δ sh	..Shale		
Δ clay	..Clay	Δ Mn	..Manganese	Δ sid	..Siderite		
Δ Co	..Cobalt	Δ mb	..Marble	Δ si	..Silica		
Δ cob	..Cobaltite	Δ mar	..Marcasite	Δ Ag	..Silver		
Δ cb	..Columbite	Δ ma	..Marl	Δ sl	..Slate		
Δ Cu	..Copper	Δ mi	..Mica	Δ sm	..Smaltite		
Δ cor	..Corundum	Δ ml	..Millerite	Δ sod	..Sodalite		
Δ dol	..Dolomite	Δ mo	..Molybdenite	Δ spec	..Specularite		
Δ ep	..Epidote	Δ Mo	..Molybdenum	Δ sp	..Sphalerite		
Δ ery	..Erythrite	Δ mon	..Monazite	Δ spd	..Spodumene		
Δ fel	..Feldspar	Δ ne	..Nephelite (nepheline)	Δ staur	..Staurolite		
Δ fl	..Fluorite (fluorspar)	Δ nc	..Nicolite	Δ stib	..Stibnite		

Solid triangles indicate metal and mineral occurrences shown on the accompanying maps.

MINERAL OCCURRENCES

Map Ref. Letter	Name(s)	Mineralization		Source Mineral Deposit Record	References in OGS Mineral Deposits Circulars & OGS Industrial Mineral Reports	Additional References and/or Remarks
A	Beatty Con. IX, Lot 28	mb		#01237	OGS 1981, MDC 21, p.103	OGS 1980, OFR 5295, p.226 + Map P.1980 AFRO 1977, #63.3447 AFRO 1976, #2.1927 OGS Map #1956-4 Clarendon-Dalhousie-Darling Area 1"=1mi. AFRO 1977 Palmerston Twp., DHR 23 AFRO 1976, #2.2052 AFRO 1976, #2.2184 AFRO 1976, #63.3428 OGS Map 1956-4 Clarendon-Dalhousie-Darling Area AFRO 1977, Palmerston Twp., DHR 22
B	Canorex Con. IV, Lot 6	U,Th str				
C	Consolidated Imperial Con.V, Lot 10,11	U,Th				
D	Cross Lake Con. IV, Lot 4	U,Th				
E	Eastman, John Con. V, Lot 2, 3 Con. III, Lot 9 Con. VI, Lot 9	U		#01241 #01242 #01243	ODM 1967, IMR 21, p.5A	OGS 1962, Econ.Geol.Ser.No.16, 2nd Ed., p.275 ODM 1956, AR Vol. 65, Pt. 7, p.37 Map 1950-4 OGS 1913, AR Vol.22,Pt.2,p.81 OGS Map 1956-4 OGS 1913, AR Vol.22,Pt.2,p.81 OGS Map 1956-4 OGS 1913, AR Vol.22,Pt.2, p.81 OGS Map 1956-4
F	Fernleigh - Clyde I Con. II, Lot 25 Fernleigh - Clyde II Con. II, Lot 24 Fernleigh-Clyde III Con. II, Lot 24	tal c				
G		mb				
H		mb				
I		mb				
(continued)						

MINERAL OCCURRENCES

Map Ref. Letter	Name(s)	Mineralization	Source Mineral Deposit Record	References in OGS Mineral Deposits Circulars & OGS Industrial Mineral Reports	Additional References and/or Remarks
J	(continued) Maly, Fred Con. II, Lot 24	mi		OGS 1967, IMR 21, p. 30	OGS 1965, AR Vol. 65, PT. 7, p. 44 OGS 1964, GC12, p. 17+Map 2053 OGS Map 1956-4 DEMUR #070622
K	Marlhill Con. VII, Lot 4	calc			OGS 1964, GC 12, p. 17 OGS 1956, AR Vol. 65, PT7, p. 42-3 DEMUR/CANMET 1938 #781, p. 73-74 GSC 1921, Mines Br. Rept. 586, p. 15
L	McKinnon, Hugh Con. VIII, IX, Lot 29	py, po			NMI File 31C/15 CCT 1
M	Moors-Elliott Con. IX, Lot 29, 30	mb	#01239	OGS 1981, MDC21, p103 114, 128	GDM 1956, AR Vol. 45, Pt. 7
N	Mud Lake Con. II, Lot 22	gt			OGS 1980, OFR 5295, p. 226, 236 + P. 1980 OGS Map 1956-4 OGS GC 12, p. 17
O	Ompah Con. III, Lot 28	mb	#01240		DEMUR/CANMET 1927, #677, p. 29
P	Picamine Con. VIII, IX, Lot 1, 2	Cu, Au			OGS Map 2053, Madoc Area OGS Map 1956-4
Q	Ram Con. VI, Lot 6	trem, talc mi			OGS 1964, GC12, p. 17 + Map 2053 AFRO 1957, #63A.332 Mines Br. Mem. Series 113, 1951 OGS 1956, AR Vol. 65, PT7, p. 42 NMI File 31C/15, Cu 1 Con. VIII & IX, Lots 1, 2 AFRO 1972, #2.1095 OGS 1964, GC12, p. 17 OGS 1956, AR Vol. 65, PT. 7, p. 45 OGS Map 2053, Madoc Area N. Miner 80-05-29, RAM profitp20 DEMUR #070765 NMI File 31C/15, Tm 1
	(continued)				

MINERAL OCCURRENCES					Source Mineral Deposit Record	References in OGS Mineral Deposits Circulars & OGS Industrial Mineral Reports	Additional References and/or Remarks
Map Ref. Letter	Name(s)	Mineralization					
R	(continued) Rexdale Con. IV, Lot 4	U,Th					AFRO 1969, Palmerston Twp., DHR 14, 15 AFRO 1969, #63.2442 AFRO 1957, Palmerston Twp., DMR 12 OGS Map 1956-4 NMI File 31C/5 U 1 GSC 1899, AR Vol. 12, p. 29-32 OGS 1956, AR Vol. 65, PT7, p. 41-42 GSC 1958, Bull. 45, p. 51-53 NMI File 31C/15, Fe 3 OGS Map 2053 - Madoc Area OGS 1913, AR Vol. 22, PT. 2, p. 81 OGS Map 1956-4, 1" = 1 mi. OGS 1980, OFR 5295, p. 226+Map P. 1980 OGS Map 1956-4, 1" = 1 mi. OGS 1980, OFR 5296, p. 178-179 + P. 2209 OGS Map 1956-4, 1" = 1 mile Lot 27, 28, Con. II OGS 1956, AR Vol. 65, PT7, p. 145 OGS Map 1956-4, 1" = 1 mi. AFRO 1977, #63.3491 AFRO 1976, #2.2284 GSC 1962, Econ. Geol. Series #16, p. 275 GSC 1890, Royal Commission Report, p. 129 OGS 1956, AR Vol. 65, Pt. 7
S	Robertsville (Mississippi) Con. IX, Lot 3, 4	mag, py, ti cp, ap, str	#01029		OGS 1968, MRC11p141		
T	Small Pond Con. I, Lot 20 Sunday	mb	#01244				
U	Con. VIII, Lot 26	mb			OGS 1981, MDC21, p. 103		
V	Turcott Lake Con. V, Lot 29	mi, gt					
W	Twenty-six Lake Con. IX, Lot 28	Fe(mag)			OGS 1980, MDC 20, p. 122-23 + p. 2211 OGS 1968, MDC11, p. 141 OGS 1967, MRC 4, p. 8		
X	Westwind Con. III, Lot 9	U,Th					
Y	Wilbur (unknown)	mag, py					
Z	Con. VI, Lot 6	talc, trem					

PALMERSTON TOWNSHIP

TYPE OF WORK		Numbers below represent the year in which the work was done, e.g., 68 for 1968																
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE TWEED	COMPANY/AUTHOR (file number)	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATION	SELF POTENTIAL	RESISTIVITY	
1	Agnes & Jennie Mining Co. (Sommerville, R.W.) AFRO file: 2.3172 AFRO file: 28 AFRO file: 29				80 80			80	79		79							
2	Bidgood, W.C., Elwood, R. & Riddell, D. AFRO file: 2.1928 AFRO file: 2.1927													74 74				
3	Bijou Mines Ltd. (Jewel, J.P., Riddell, D. & Elwood, R.) AFRO file: 2.2240 AFRO file: 2.2284 AFRO file: 2.2363 AFRO file: 2.2502 AFRO file: 20 AFRO file: 22 AFRO file: 24				77 77 77				76 76 76		76 76 76					77		
4	Canorex Developement Ltd. (Goldsmith, L.B.) AFRO file: 63.3447			76	76 76 76	76												

TYPE OF WORK		Numbers below represent the year in which the work was done, e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE	TWEED	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATION	SELF POTENTIAL	RESISTIVITY			
	COMPANY/AUTHOR (file number)																			
5	Consol. Imperial Mines Ltd (Golant, L&Harper, H.) AFRO file: 2.1991 AFRO file: 2.2052 AFRO file: 63.3428			75 76		75 76								75 76 76						
6	Corval Corp. Ltd. AFRO file: 63A.332	57																		
7	Eastman, J.&H. AFRO file: 11				56															
8	Gamble, Arthur (Gamson 1)				68															
9	Geophysical Eng. Ltd. (Wright, R.J.) AFRO file: 2.2253 AFRO file: 18							76			76									
10	Grange Mining Corp. Ltd. AFRO file: 2.2169								75		75									
11	Groundstar Resources Ltd. (McCannell, J.D.) AFRO file: 2.2729 AFRO file: 25 AFRO file: 26 (continued)	77-78				76-77 79													77-78	

GOLF FORM NO. 2

TYPE OF WORK		Numbers below represent the year in which the work was done e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE TWEED		GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATION	SELF POTENTIAL	RESISTIVITY	BULK SAMPLE MILL FEASIBILITY		
COMPANY/AUTHOR (file number)																				
	(continued) AFRO file: 27					80														
12	Keevil Mining Group (Substantial Dev.Ltd.- option) AFRO file: 63.2646 AFRO file: 63A.569	70		69					69											
13	Noranda Expl. Co. (Consol. Imp.Mines Ltd. option) AFRO file: 2.2490 AFRO file: 23 AFRO file: 63.3515	77			77 77 77	77 77 77								77 77						
14	Ram Petroleum Ltd. (Robinson,B.&Gillett,T.E) AFRO file: 16 AFRO file: 2.1095 AFRO file: 17 AFRO file: 2.2469 AFRO file: 19 AFRO file: 63.3517	72		71 73 76				72										77-78		
15	Rexdale Mines Ltd.(Baker, J.) (continued)							77-78												

TYPE OF WORK		Numbers below represent the year in which the work was done, e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE TWEED	COMPANY/AUTHOR (file number)	GEOLOGICAL	GEOCHEMICAL	TRENCHING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIO-METRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIO-METRIC	INDUCED POLARIZATION	SELF POTENTIAL	RESISTIVITY			
			AFRO file: 63.2442 AFRO file: 14 AFRO file: 15			69 69										69				
16	West Wind Minerals Ltd. (Kidd, R.) AFRO file: 63.3491 AFRO file: 63.3511 AFRO file: 21		77 77 77	77 77 77	77 77 77															

DRILL HOLE SUMMARY

Map Drilling Location Number	Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
1	Gamble, Arthur (Gamson claims)	1	1968	275	-45	2	125	py	
2	"	2	1968	275	-45	2	125		
3	"	3	1968	275	-60	4.3	125		
4	"	4	1968	275	-60	8	125		
5	Rexdale Mines Ltd.	A-1	1969	-	90	2	94	mo, uran	
6	Rexdale Mines Ltd.	A-2	1969	-	90	4	119	mo	
7	"	A-3	1969	-	90	5.8	104	U	
8	"	A-4	1969	-	90	9.5	101		
9	"	A-5	1969	-	90	0	101	uran	
10	"	A-6	1969	-	90	8	120		
11	"	A-7	1969	-	90	1.5	107.1	uran	
12	"	A-8	1969	-	90	8	40		
13	"	A-9	1969	-	90	-	102.8		
14	"	B-1	1969	-	90	9	84	py, po	
15	"	B-2	1969	120	-60	12	101	py, po	
16	"	B-3	1969	-	90	14.5	102	py, fl	
17	"	B-4	1969	290	-45	12	107		
18	"	B-5	1969	275	-45	15	118		
19	"	B-6	1969	267	-45	14	119	gf	
20	"	B-7	1969	-	90	4	126		
21	"	B-8	1969	-	90	3	55		
22	"	B-9	1969	-	90	5	84	gf	
23	"	B-10	1969	-	90	9	51		
24	"	B-11	1969	-	90	15	85		
25	"	B-12	1969	-	90	7	142	gf	
26	"	B-13	1969	-	90	7	139	gf, py	
27	"	B-14	1969	-	90	6.3	163	py, gf	
28	"	D-1	1969	308	-45	2	252		
29	"	D-2	1969	304	-45	2	124	uran	
30	" (continued)	D-3	1969	330	-45	7	93		

DRILL HOLE SUMMARY		Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
Map Drilling Location Number										
31	(continued)	"	D-4	1969	304	-45	9	164		U ₃ O ₈ . ThO ₂
32	"	"	W-1	1969	-	90	-	68.5	py, cp	
33	"	"	W-3	1969	-	90	-	33.8	py, uran	
34	"	"	W-4	1969	-	90	-	29.6	py, mag	
35	"	"	W-5	1969	-	90	-	27.2	uran, py, po, mo	
36	"	"	W-6	1969	-	90	-	88.4	mo, py, po, uran	
37	"	"	F-1	1969	-	90	2.5	102		
38	Rexdale Mines Ltd.	"	F-2	1969	-	90	3	165	mo, py	
39	"	"	F-3	1969	-	90	2.5	154	py, po	
40	"	"	F-4	1969	-	90	3	107		
41	"	"	F-5	1969	-	90	4	113		
42	"	"	F-6	1969	-	90	1.1	128.2	py	
43	"	"	F-7	1969	-	90	1.5	433	py, po	
44	"	"	F-8	1969	-	90	8.6	162.3	py, po, cp	
45	"	"	F-9	1969	-	90	5	163.7	py, po	
46	"	"	F-10	1969	-	90	4	150		
47	"	"	F-11	1969	-	90	-	112		
48	"	"	F-12	1969	-	90	9	118.5		
49	Eastman, John	"	One	1969	-	90	7	205	py	
50	Ram Petroleum Ltd.	"	Two	1971	-	-	6	184	cp	
51	"	"	Three	1971	-	-	4	180	cp, po	
52	"	"	Four	1971	-	-	4	256		
53	"	"	II	1971	360	-45	2	255		
54	Ram Petroleum Ltd.	"	HM-1	1976	-	90	6	106	mo, py	U ₃ O ₈
55	Wright, R. J.	"	HM-2	1976	-	90	34	121	po, mar	U ₃ O ₈
56	Wright, R. J.	"	HM-3	1976	-	90	30	169	mo	
57	"	"	HM-4	1976	-	90	15	42	py, po	
58	"	"	HM-5	1976	310	-45	40	70		
59	"	"	HM-6	1976	-	90	-	154	py, cp, mo	U ₃ O ₈
60	"	"	HM-7	1976	-	90	3	113	py, mo	
61	"	"	HM-8	1976	-	90	14	152	py, po, hem	
62	(continued)	"								

DRILL HOLE SUMMARY		Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth	Initial Dip of Hole	Thickness of Overburden	Total Length of Hole	Mineralization Noted in Log	Assay Data Included for
Map Drilling Location Number										
63	(continued)	"	HM-9	1976	-	90	4	152	py, po	U ₃ O ₈
64	"	"	HM-10	1976	-	90	4	108		U ₃ O ₈
65	"	"	HM-11	1976	-	90	-	103	mo	U ₃ O ₈
66	Canorex Development Ltd.	"	C-1	1976	320	-45	8	160	hem, cp, py	
67	"	"	C-2	1976	320	-45	6.1	114	mag, py, po	
68	"	"	C-3	1976	-	90	4.6	32.5	py, po, cp, mag	
69	"	"	C-4	1976	320	-45	6.2	91.7	mag, py	U ₃ O ₈
70	"	"	C-5	1976	195	-45	4.6	53.8	hem, cp, py, mag, po	U ₃ O ₈
71	Ram Petroleum Ltd.	"	1-76	1976	170	-45	-	177	trem	
72	"	"	2-76	1976	170	-45	5	125		
73	Noranda Exploration Co.	"	P-77-1	1977	320	-45	25	527		U ₃ O ₈ ThO ₂
74	"	"	P-77-2	1977	320	-45	36	419		U ₃ O ₈ ThO ₂
75	"	"	P-77-3	1977	315	50	49	452	mag	U ₃ O ₈ ThO ₂
76	"	"	P-77-4	1977	315	45	32	370	mag	U ₃ O ₈ ThO ₂
77	"	"	P-77-5	1977	330	45	24	390	mo, py, cp	U ₃ O ₈ ThO ₂
78	Westwind Mines Ltd.	"	1	1977	339	50	6	250		U ₃ O ₈
79	"	"	2	1977	322	45	6	250		U ₃ O ₈
80	"	"	3	1977	322	45	6	300		
81	"	"	4	1977	142	45	3	300.8		
82	"	"	5	1977	159	45	15	200		U ₃ O ₈
83	"	"	6	1977	138	45	7	126.2	py	U ₃ O ₈
84	"	"	7	1977	138	50	6	226		U ₃ O ₈
85	"	"	8	1977	321	45	6.4	200		U ₃ O ₈
86	Bijou Mines Ltd.	"	B.1	1977	308	45	13	243	py	U ₃ O ₈
87	Riddell, D. W.	"	#1-1	1977	341	45	2	384	cp, py	U ₃ O ₈
88	Riddell, D.W.	"	3	1977	341	45	2	226		
89	"	"	4	1977	341	85	2	150		
90	Groundstar Resources	"	P-1	1976	285	45	4.5	124	mag, py	U ₃ O ₈ ThO ₂
91	"	"	P-2	1976	285	55	2.8	62		U ₃ O ₈ ThO ₂
92	"	"	P-3	1976	285	90	2	32	mag	U ₃ O ₈ ThO ₂
	(continued)									

GOIF FORM NO. 3

DRILL HOLE SUMMARY		Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
Map Drilling Location Number										
93	(continued)	Groundstar Resources	P-4	1976	285	55	3.5	47	mag	U ₃ O ₈ ThO ₂
94	"	"	P-5	1976	285	55	5	51		U ₃ O ₈ ThO ₂
95	"	"	P-6	1976	320	55	4	105	hem	U ₃ O ₈
96	"	"	P-7	1976	320	55	4	127	hem, mag	U ₃ O ₈
97	"	"	P-8	1976	320	55	3	295	mag, py, pc, mo, cp	U ₃ O ₈ , Au, Ag, Mo, Cu
98	"	"	P-9	1977	320	55	7.5	399	mag, py	U ₃ O ₈ , ThO ₂
99	"	"	P-10	1977	315	55	6	307		
100	"	"	P-11	1977	315	55	6	302	cor, sp, mag, py	
101	"	"	P-12	1977	315	55	17	286		
102	"	"	P-13	1977	315	55	5	192	gf	
103	Groundstar Resources	"	79-1	1979	310	45	7	140		
104	"	"	79-2	1979	310	55	16	147		
105	"	"	79-3	1979	310	45	17	167		
106	"	"	79-4	1979	310	45	15	187		
107	"	"	79-5	1979	310	45	2	229		
108	"	"	79-6	1979	300	45	3	151		
109	AJM Exploration Ltd.	"	SG-1	1980	-	90	-	104	py	
110	"	"	SG-2	1980	295	70	-	173		
111	"	"	SG-3	1980	295	80	-	165	py	
112	"	"	SG-4	1980	-	90	-	110	py	
113	"	"	SG-5	1980	280	70	-	104	mo	
114	"	"	SG-6	1980	-	90	-	107.3		
115	"	"	SG-7	1980	280	70	-	168		
116	AJM Explorations Ltd.	"	SG-8	1980	295	70	-	158.3	py	
117	"	"	SG-9	1980	295	70	-	106		
118	"	"	SG-10	1980	284	70	-	163		
119	"	"	SG-11	1980	295	70	4	167		
120	"	"	SG-12	1980	295	70	-	101		
121	"	"	SG-13	1980	282	70	-	103		
122	"	"	SG-14	1980	282	70	-	180		
123	"	"	SG-15	1980	295	70	1	138	py	
124	"	"	SG-17	1980	295	70	-	152		

(continued)

DRILL HOLE SUMMARY

Map Drilling Location Number	Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
125	(continued) Groundstar Resources Limited	80-2	1980	300	55	4	500		
126	"	80-3	1980	320	55	9	508		
127	"	80-4	1980	310	55	4	120		
135	"	80-5	1980	310	55	4	405		
128	"	80-1	1980	295	49	2	404	py	
129	AJM Explorations Ltd	SG-16	1980	295	70	5	129		
130	"	SG-18	1980	-	90	1.5	183		
131	"	SG-19	1980	-	90	-	177		
132	"	SG-20	1980	295	70	5	190	py	
133	"	SG-21	1980	270	70	5	123		
134	"	SG-22	1980	-	90	2	197	py	

GDIF FORM NO. 3

DRILLHOLE SUMMARY		Assay Data Included for	Mineralization Noted in Log	Total Length of Hole	Thickness of Overburden	Initial Dip of Hole	Bearing Azimuth	Date Drilled	Company Drillhole Number
Map Drilling Location Number	Company Name								

AIRBORNE GEOPHYSICAL SURVEY DATA					
No.	By For	Type of Survey	Flight Altitude	Flight Line Direction	Flight Line Spacing
10	By: Geoterrex Limited For: Grange Mining Corp. Ltd.	Magnetometer, Radiometric	150' - 200'	N-S	1/8 mi.
3	By: Geoterrex Limited For: J. P. Jewell	Magnetometer, Radiometric	150' - 200'	N-S	1/8 mi.
9	By: Geoterrex Limited For: Geophysical Engineering Limited	Magnetometer, Radiometric	150' - 200'	N-S	1/8 mi.
3	By: Geoterrex Limited For: J.P. Jewell (E.L. Reid)	Magnetic, Radiometric	150'	N-S	669 ft.
1	By: Kenting Earth Sciences Limited	Magnetic, Radiometric	150' - 200'	N-S	1/8 mi.
12	By: A.J.M. Explorations For: Keevil Mining Group Ltd.	Radiometric	150'	NW-SE	1/16 mi.

G.D.F. FORM NO. 4

Map Sample Site Reference Number	GEOCHEMICAL SURVEY DATA		By	Reference
	Type of Survey	Analysis For		
16	Radon Survey	Radon	West Wind Minerals Ltd.	AFRO 1977, 63.3511

MISCELLANEOUS DATA

AGE DATING

Site	Method	Material	Reference	Result

NEWSPAPER CLIPPINGS FILE

NOTE: A file of newspaper clippings about the companies listed below, who have worked in this area, is maintained in the Regional/Resident Geologist's Office, Kemptville, Ontario

N. Miner, 1977 - East Bancroft area, Bijou starting on uranium property - found in Palmerston assessment, file #29

ODM GENERAL INDEX SEARCH

Words searched: Palmerston Township

Index Volume	Listing:	Report Volume	Part	Page
1	Palmerston Township, Frontenac County			
	Chalcopyrite	9		196
	Field prospecting in,	5		218,219
	Geological features in	5		218
	Iron Ore	2		45
	exhibited	2		80,81
	hematite, R.C. 139	9		199
	magnetite	5		218
	mining - Robertsville Iron Mine	17		204
	Ore analysis	17		270,271,
				273
	exhibited at World's Fair	2		81
	sulphur in	17		208
	scapolite rock	8		229
	work at (1898)	8		31
	(1899)	9		104
	(1900)	10		128
	Wilbur Iron Mine			
	Accident	18	1	68,69
	Exhibits in Buffalo	11		86
	Chicago	2		78,80
	magnetite	17		204
	Notes by Folger, R.C.			135
	Mackenzie	17		225
	Merritte, R. C.			129
	Operating	17	1	25
	Ore Analysis	17		225
	for Sault Ste. Marie	17		58,198
				291,295
	Photos	11		289,290
		17		87
	Production R. C.			136
		2		59
		17		58
	Re-opened	20	1	108
	Section of formation in, R.C.			129
	work at (1899)	9		104,105
	(1900)	10		127,128
	(1901)	11		259,269
	(1907)	17		26
	(1911)	21	1	27,159
	Magnesite	9		202
	Map	22	2	77
	Mica	1		244
		9		203
	(continued)			

ODM GENERAL INDEX SEARCH

Words searched: Palmerston Township

Index Volume	Listing:	Report Volume	Part	Page
	(continued)			
	Rocks			
	conglomerate photo	22	2	79
	thickness	22	2	78
	gneiss	22	2	80
	granite	22	2	81
	Grenville series	22	2	77
	Hastings Series	22	2	78
	Limestone analysis	22	2	77
	crystalline	2		59
	Pegmatite	22	2	81
2	Calcite and dolomite (Caldwell Calcite Mine)			
	Description	31	10	59
	Production	31	1	20
	for paint trade	31	1	20
	Iron mining notes, I.O.			227
	Poe Mining Co.			
	Ferguson, I. M., operated by	28	1	31, 32
		29	1	19
4	Chalcopyrite	50	6	46
	Limestone quarry	56	1	59
5	Calcite mining	60	2	2
6	Palmerston Lake Rocks	65	7	16, 23
	Palmerston Township			
	Calcite quarry - notes and photo	65	7	42-44
	Copper prospect	65	7	42
	Iron mining	65	7	41, 45
	Mica	65	7	44
	Talc	65	7	45
	Ompah			
	Rocks, notes and photo	65	7	8-10
	Schist and kyanite in	65	7	25, 35
	Structure	65	7	28, 31
7	Palmerston Township, mineral occurrences listed	G.C. 12		17

Author	Date	SELECTED REFERENCES		Reference	Map Scales and/or Report Pages
		Title			
		GEOCHEMICAL			
		GEOLOGICAL REPORTS AND MAPS			
O.G.S.	1980	Industrial Minerals of the Pembroke-Renfrew Area + Map P.1980		OFR 5295	
O.G.S.	1981	Uranium and Thorium Deposits of Southern Ontario		OFR 5311, p.11-20	
		JOURNAL ARTICLES, THESES, TECHNICAL REPORTS			
G.S.C. Sethuraman, K. and Moore, J. M.	1962 1973	Economic Geology Series #16 Petrology of Metavolcanic Rocks in the Bishops Corners-Donaldson Area, Grenville Province, Ontario		p.275 Canadian Journal of Earth Sciences V.10, No.5, 1973	

GDIF FORM NO. 9

Author	Date	SELECTED REFERENCES	Title	Reference	Map Scales and/or Report Pages

NOTES AND ADDENDA

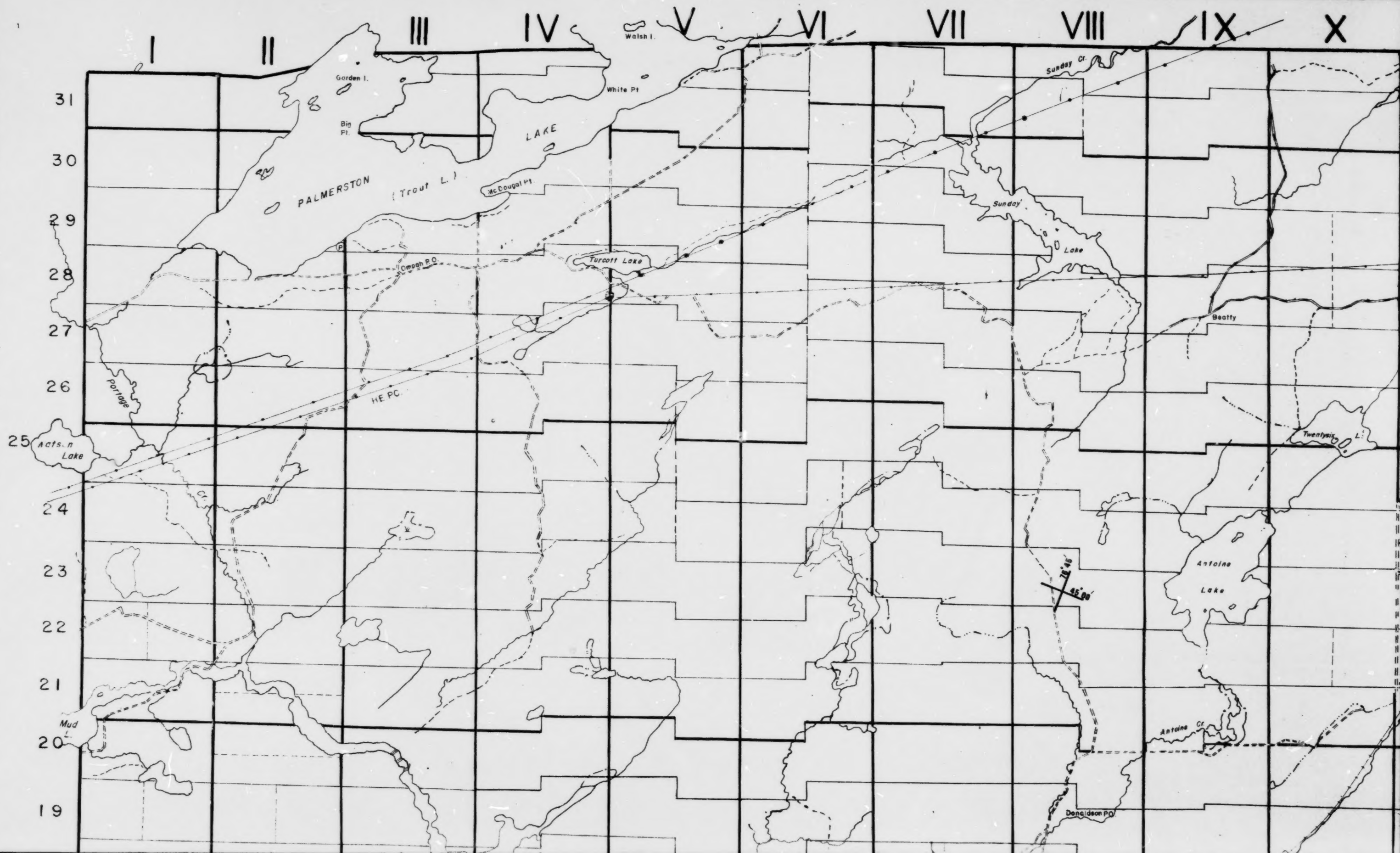
- O.G.S. 1913 Part of Palmerston Township, Frontenac County, Ontario by W. G. Miller with colour map A.R. Vol.22, pt.2
- O.G.S. 1956 Geology of the Clarendon-Dalhousie Area, Southern Ontario by B. L. Smith, with colour map, A.R. Vol.0065-7, pt. 7.
- O.G.S. 1951 Geology of South Canonto and parts of Palmerston and Lavant Townships, Frontenac and Lanark Counties, by B. L. Smith, P.R. 1951-4.

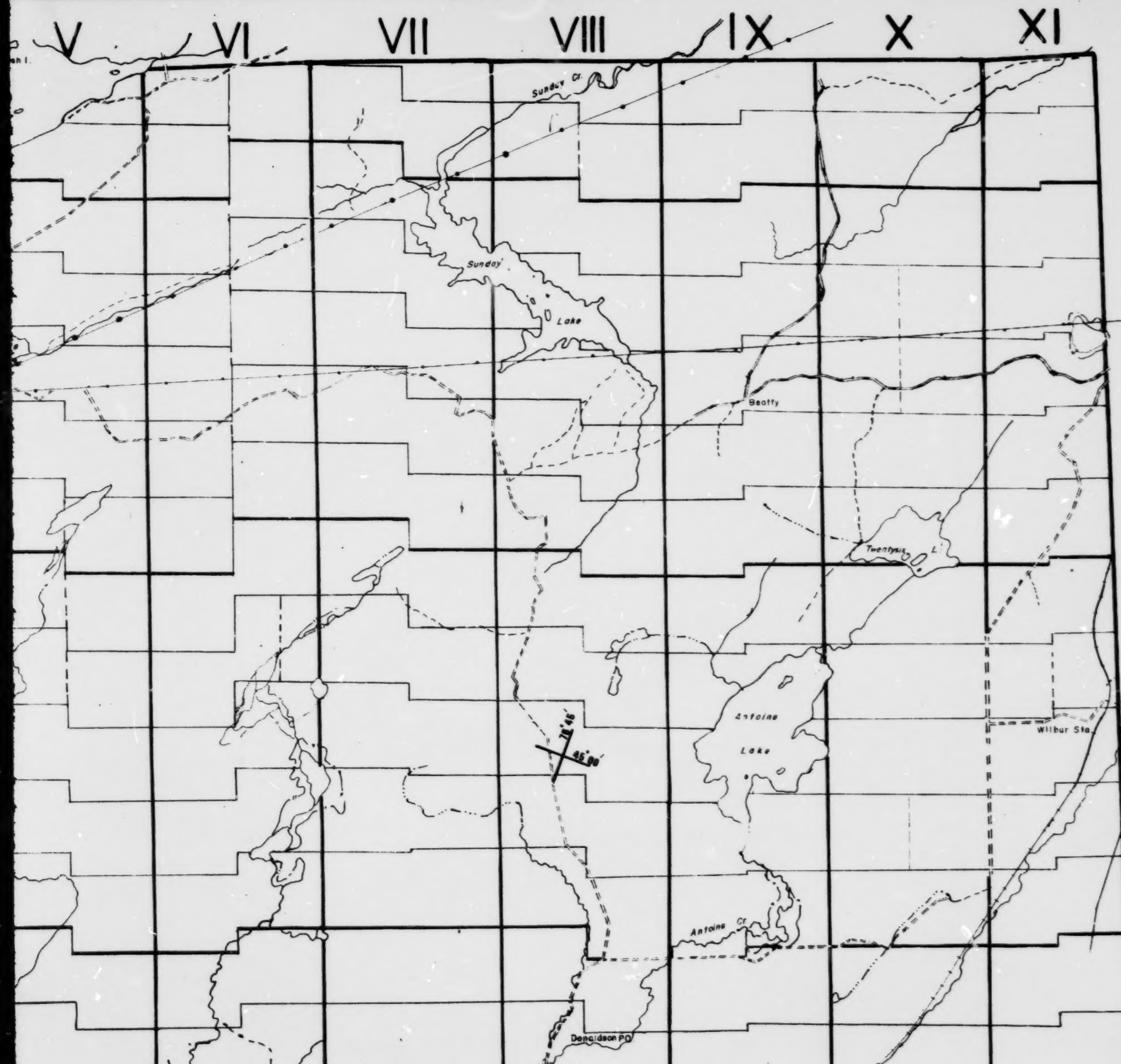
AERIAL PHOTOGRAPH INDEX

Scale 1" = $\frac{1}{4}$ mile

Year	Roll Number	Flight Line	Photo Number
1978	194	4460	36 - 41
1978	186	4461	190 - 199
1978	77	4462	63 - 79
1978	78	4463	61 - 79
1978	160	4464	207 - 223
1978	80	4465	70 - 76
1978	81	4466	33 - 49
1978	161	4467	88 - 106
1978	161	4468	223 - 235
1978	187	4469	56 - 73
1978	154	4401	204 - 222
1978	154	4402	244 - 252
1978	154	4403	141 - 152
1978	116	4404	68 - 74

PALMERSTON TO AISHIP





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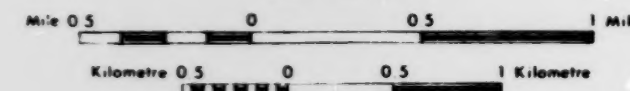
Ministry of Natural Resources
Hon. Alan W. Pope
Minister
John R. Sloan
Deputy Minister

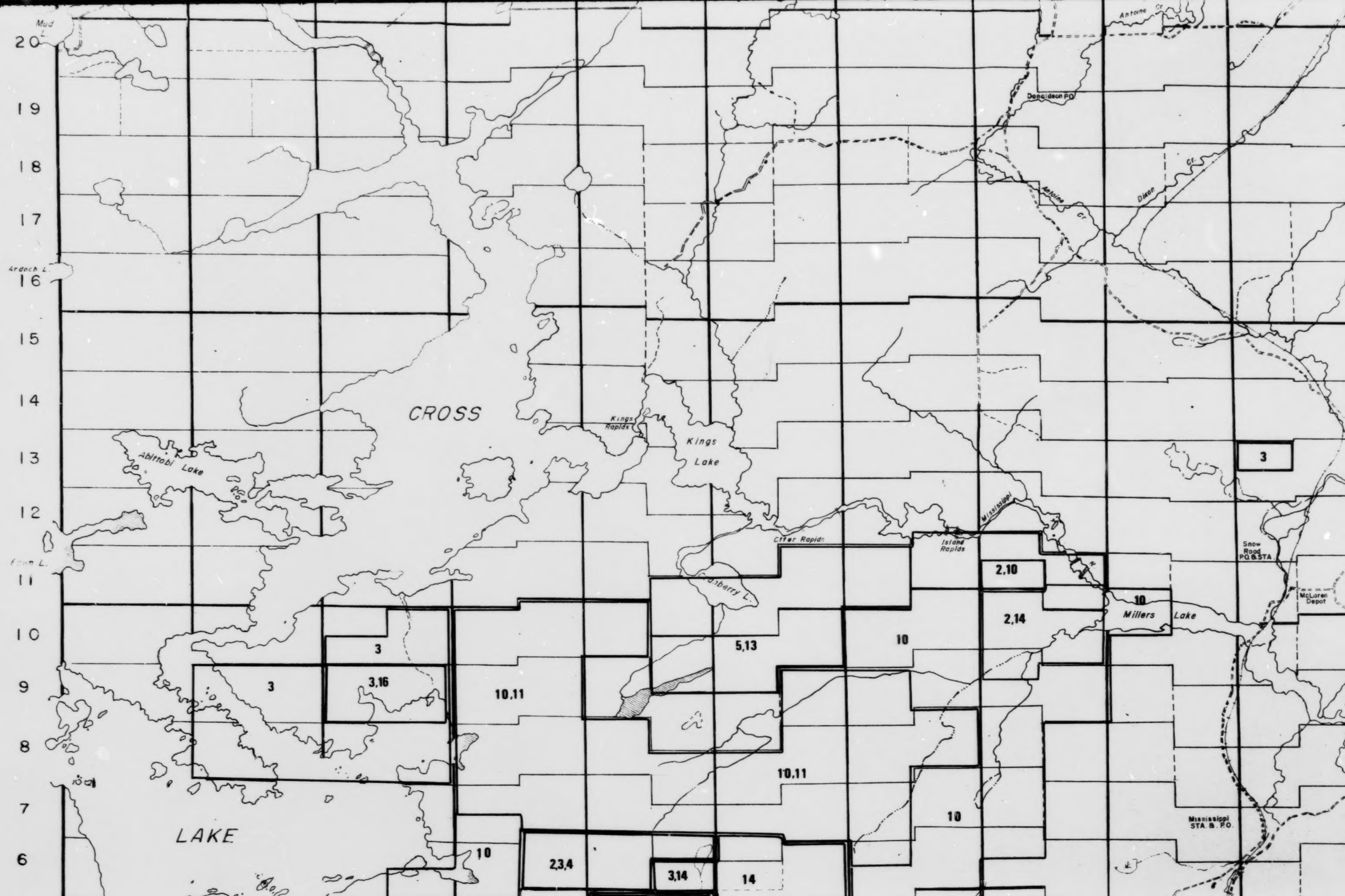
ONTARIO GEOLOGICAL SURVEY
PROPERTY LOCATION MAP
(Map 1 of 2)
to accompany GEOLOGICAL DATA
INVENTORY FOLIO 89

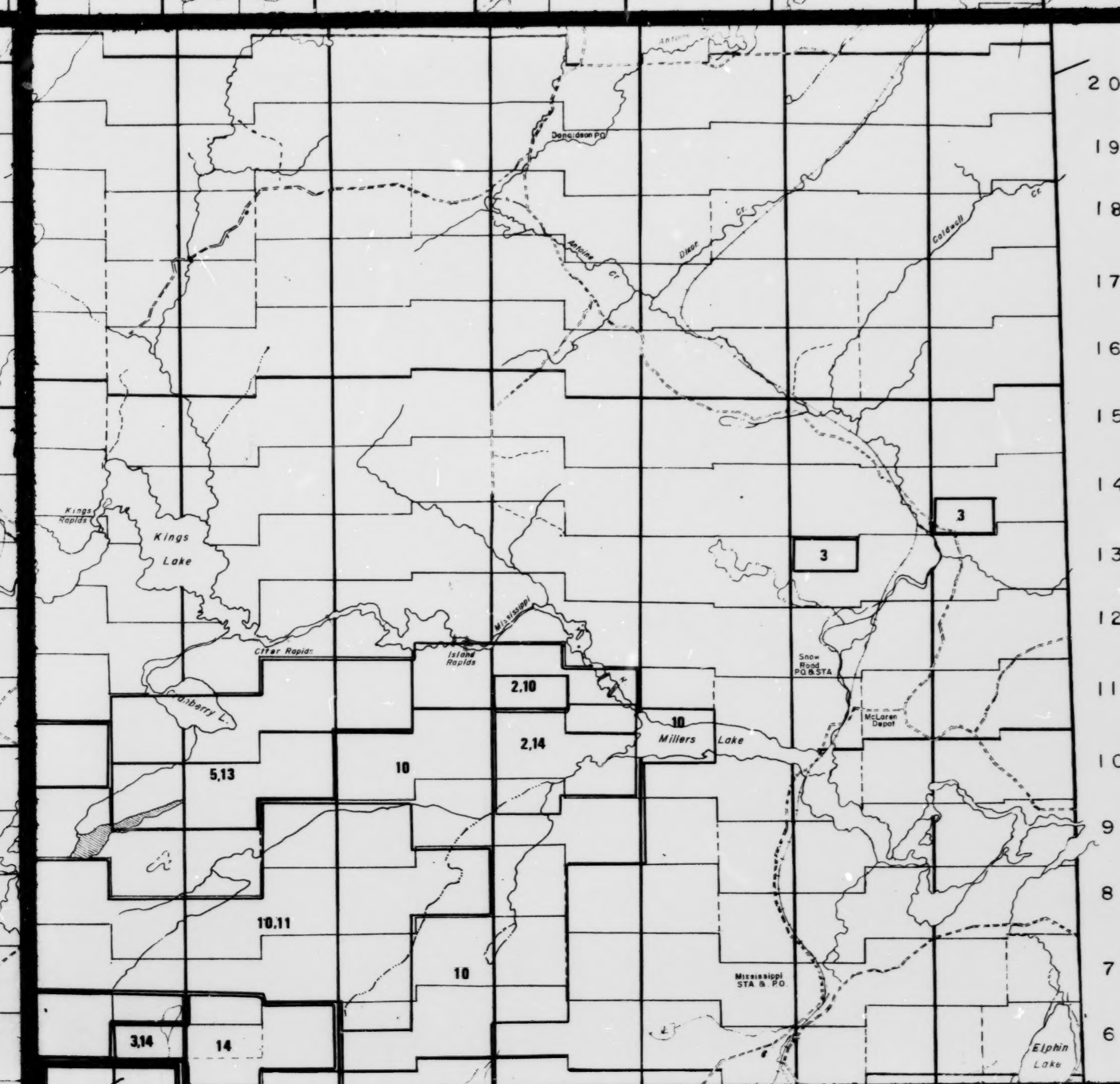
PALMERSTON TOWNSHIP

FRONTENAC COUNTY

Scale 1:31 680

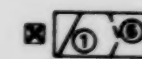
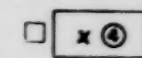
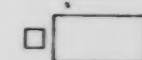


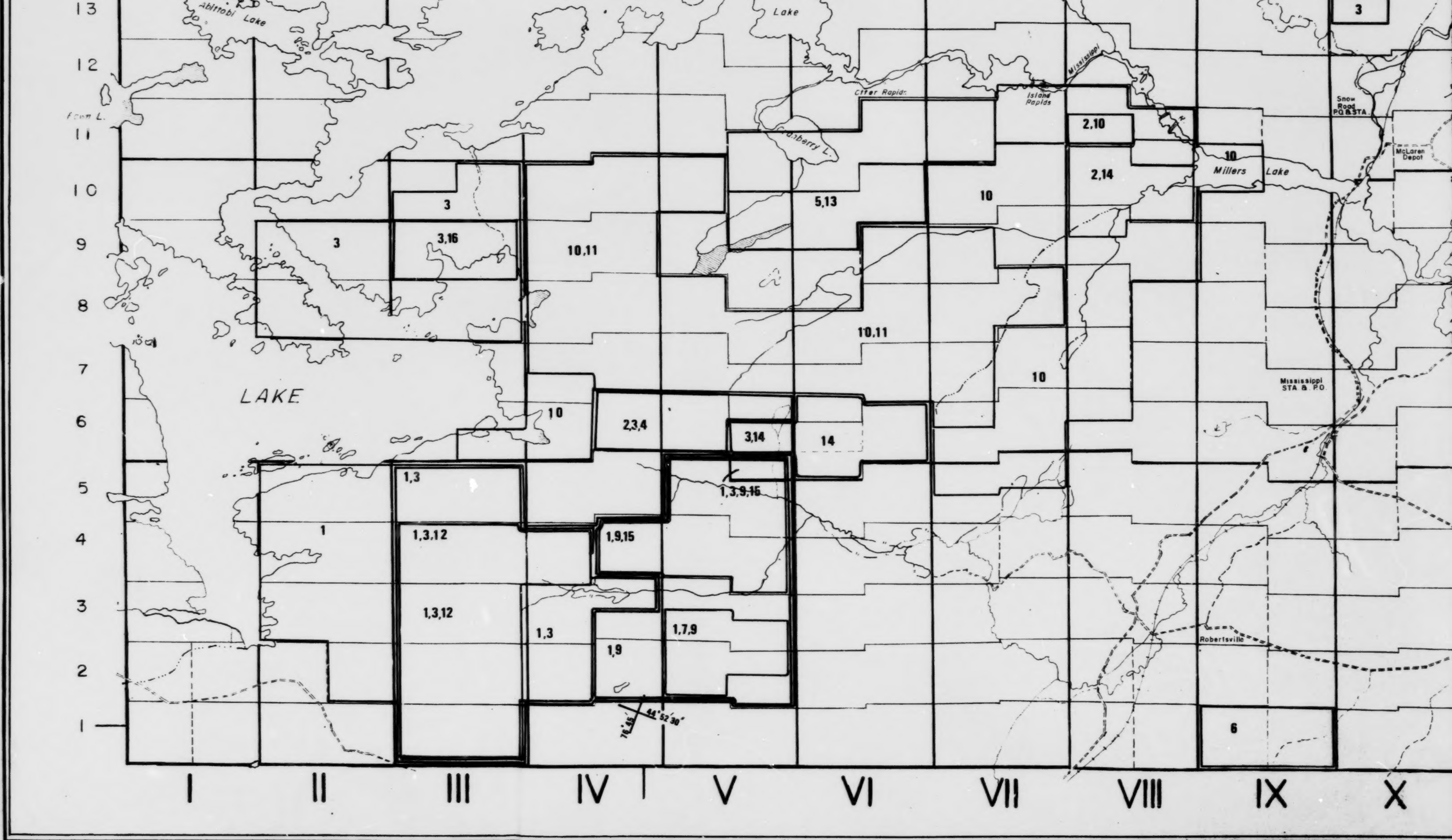


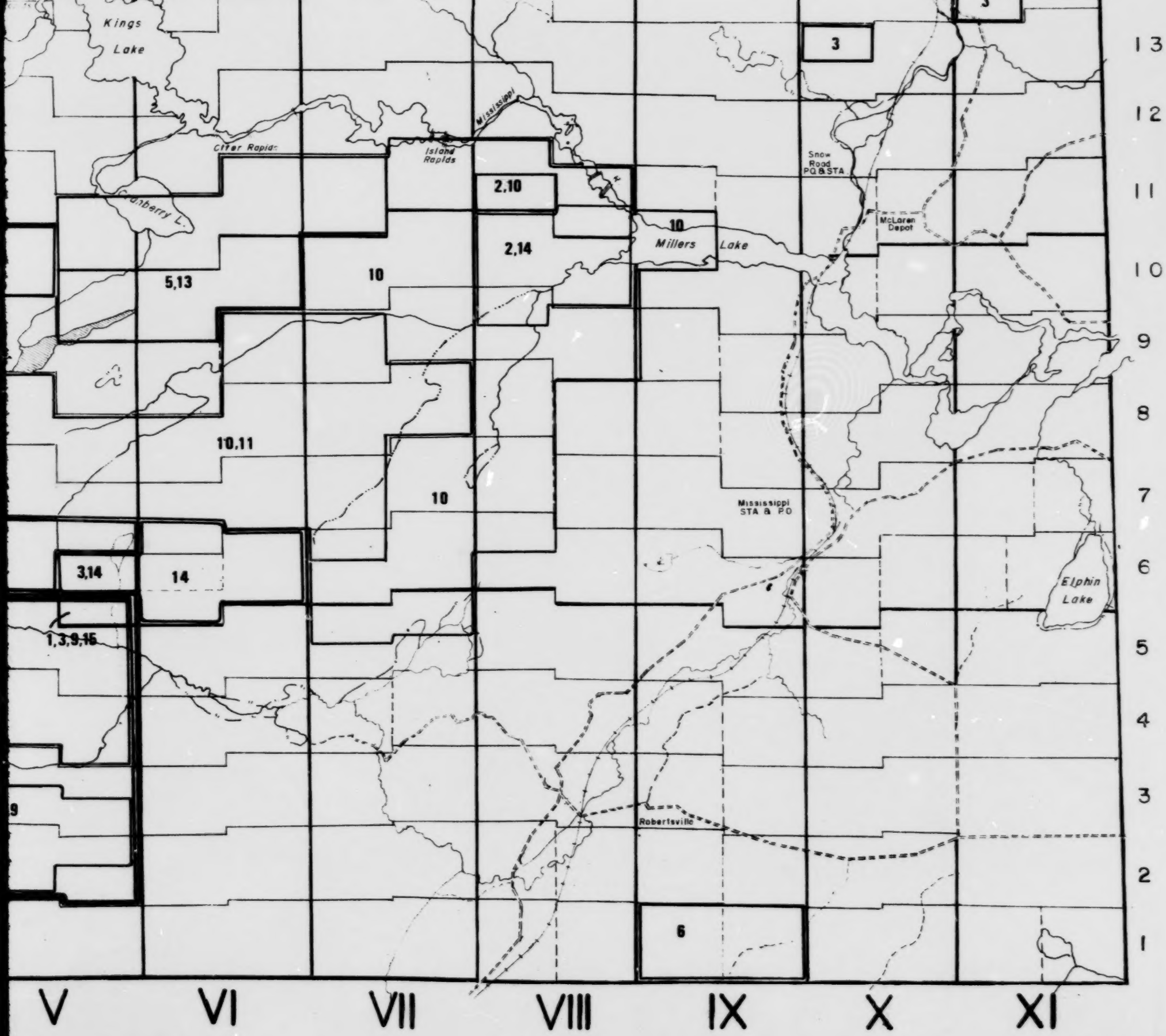


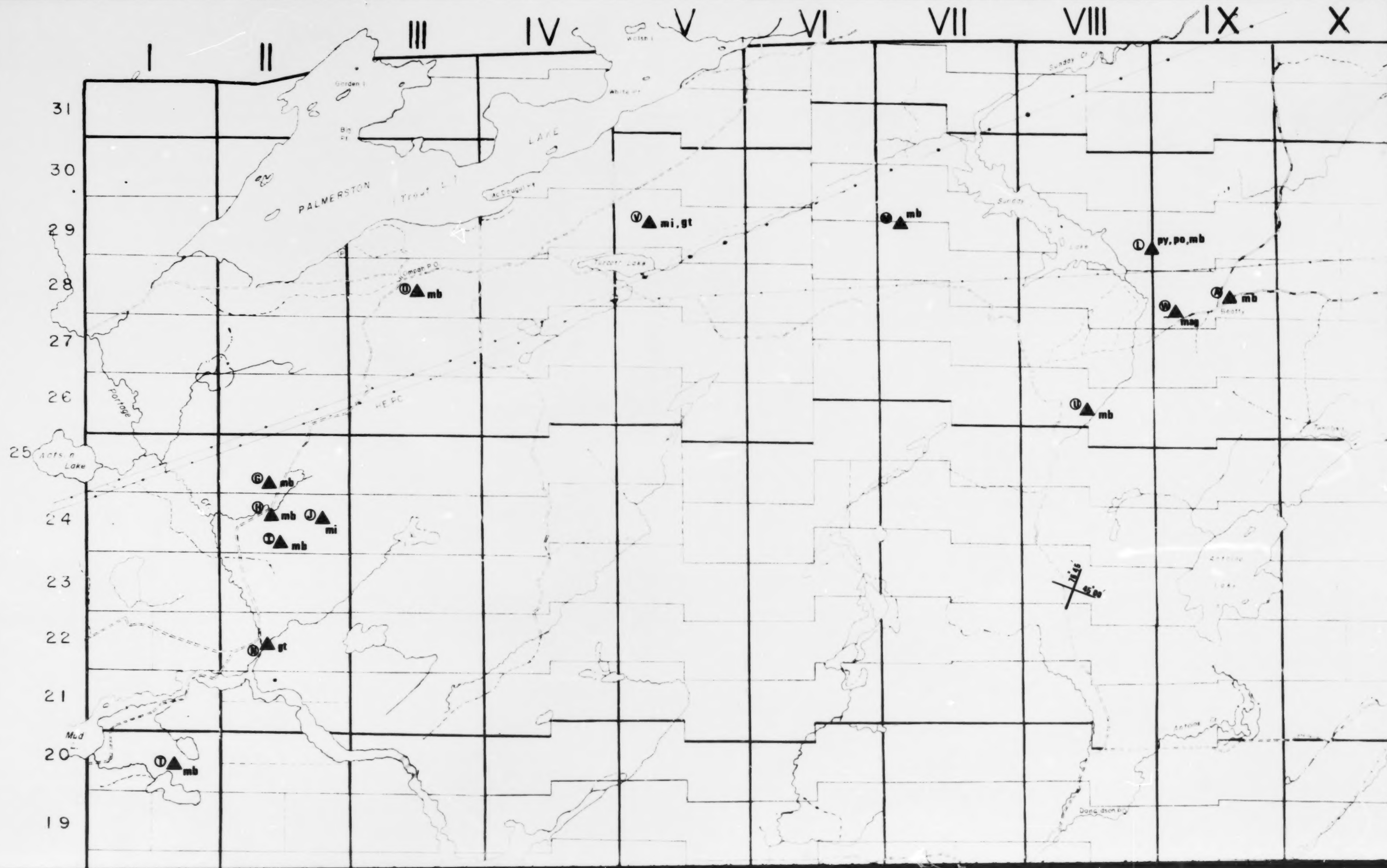
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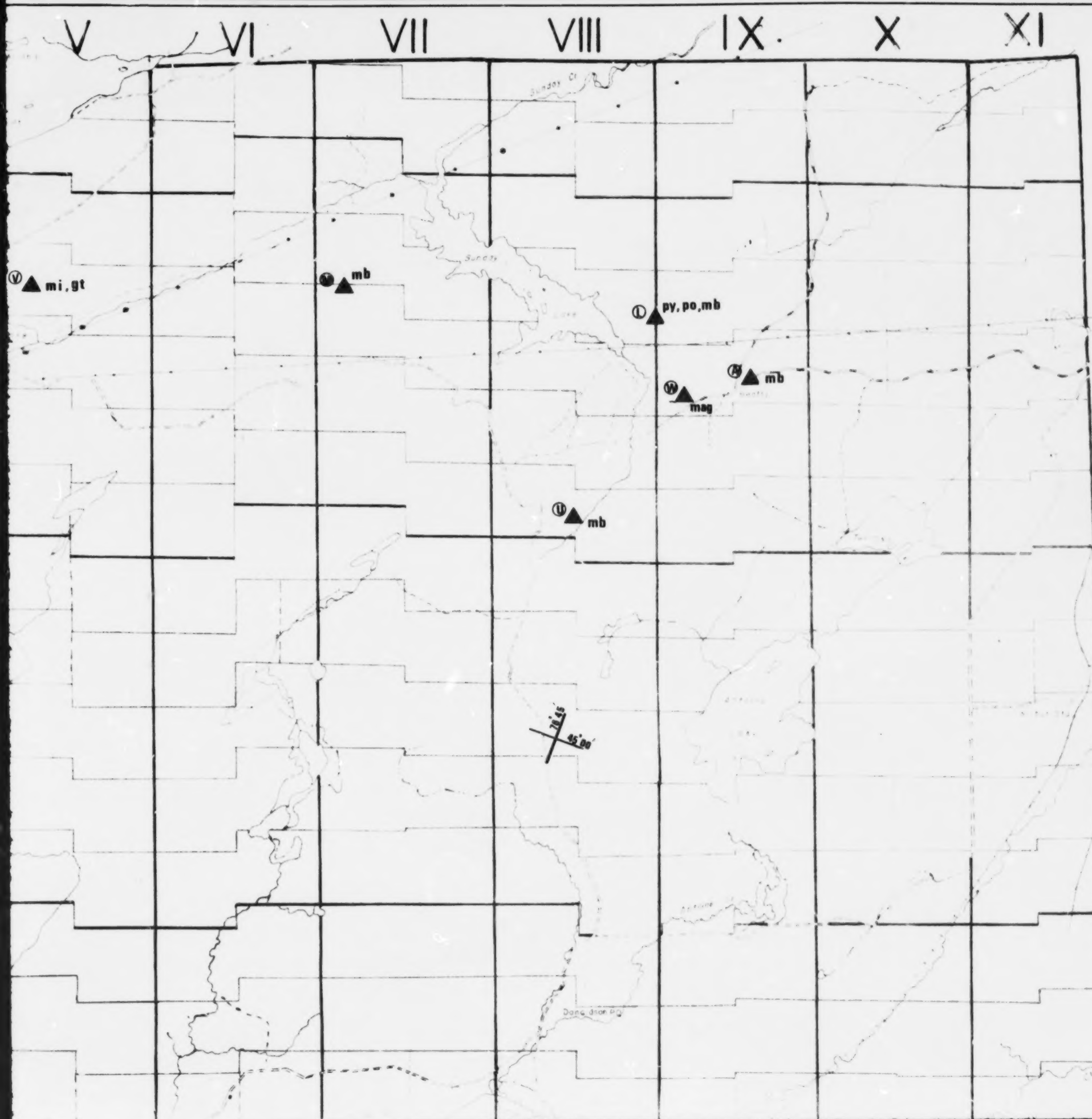
EXPLORATION DATA FILE AREAS

-  Reference number is always inside work area outlined.
See listing in text pages
-  Small area of exploration data.
- 







Ministry of
Natural
Resources

Hon. Alan W. Pope
Minister

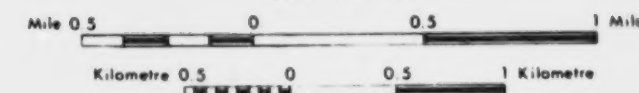
John R. Sloan
Deputy Minister

ONTARIO GEOLOGICAL SURVEY
Map to Accompany GEOLOGICAL DATA
INVENTORY FOLIO 89

PALMERSTON TOWNSHIP

FRONTENAC COUNTY

Scale 1:31 680



GEOLOGICAL AND MINING SYMBOLS

TYPES OF DATA SHOWN ON THIS MAP

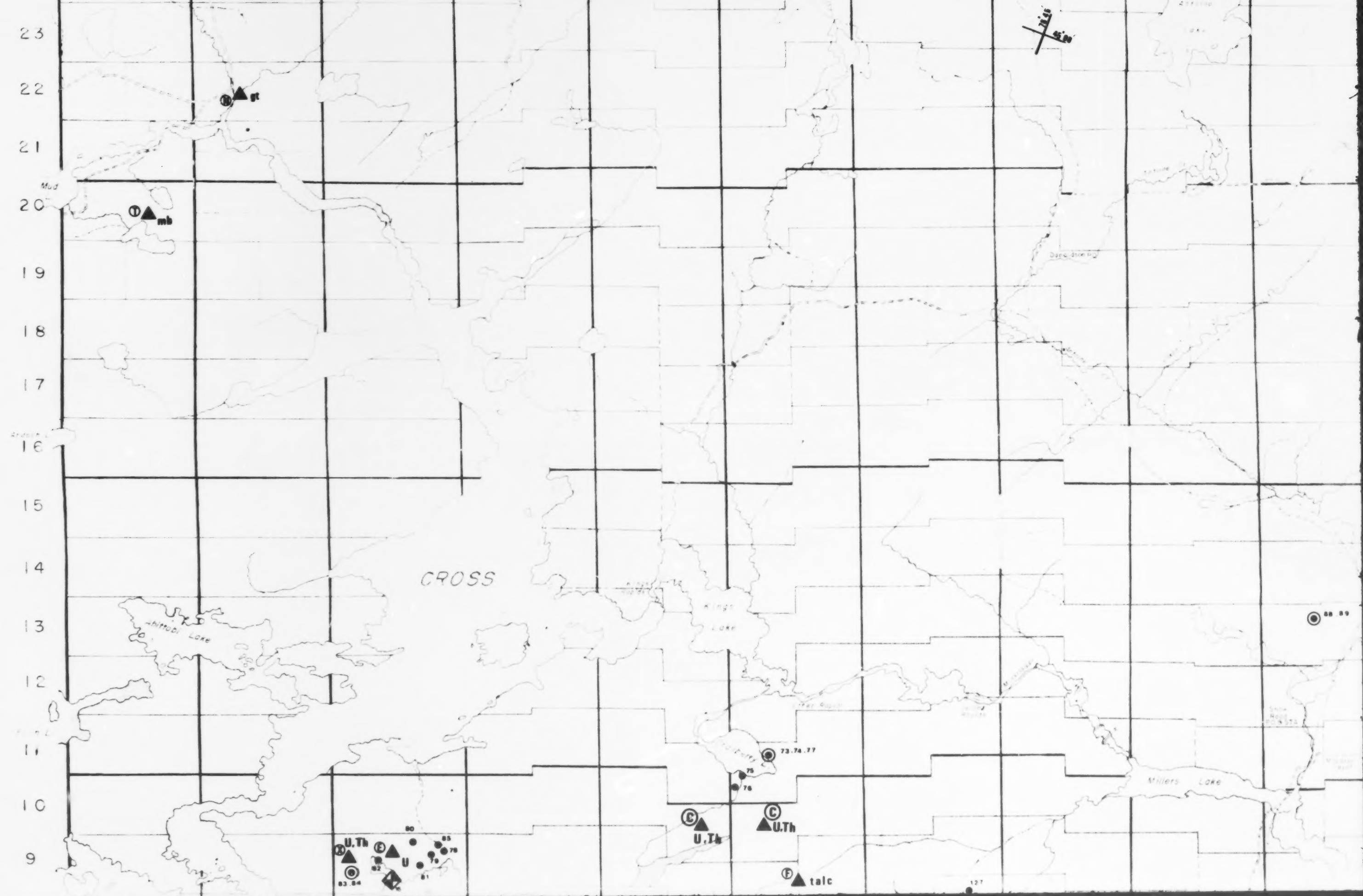
(Map 2 of 2.)

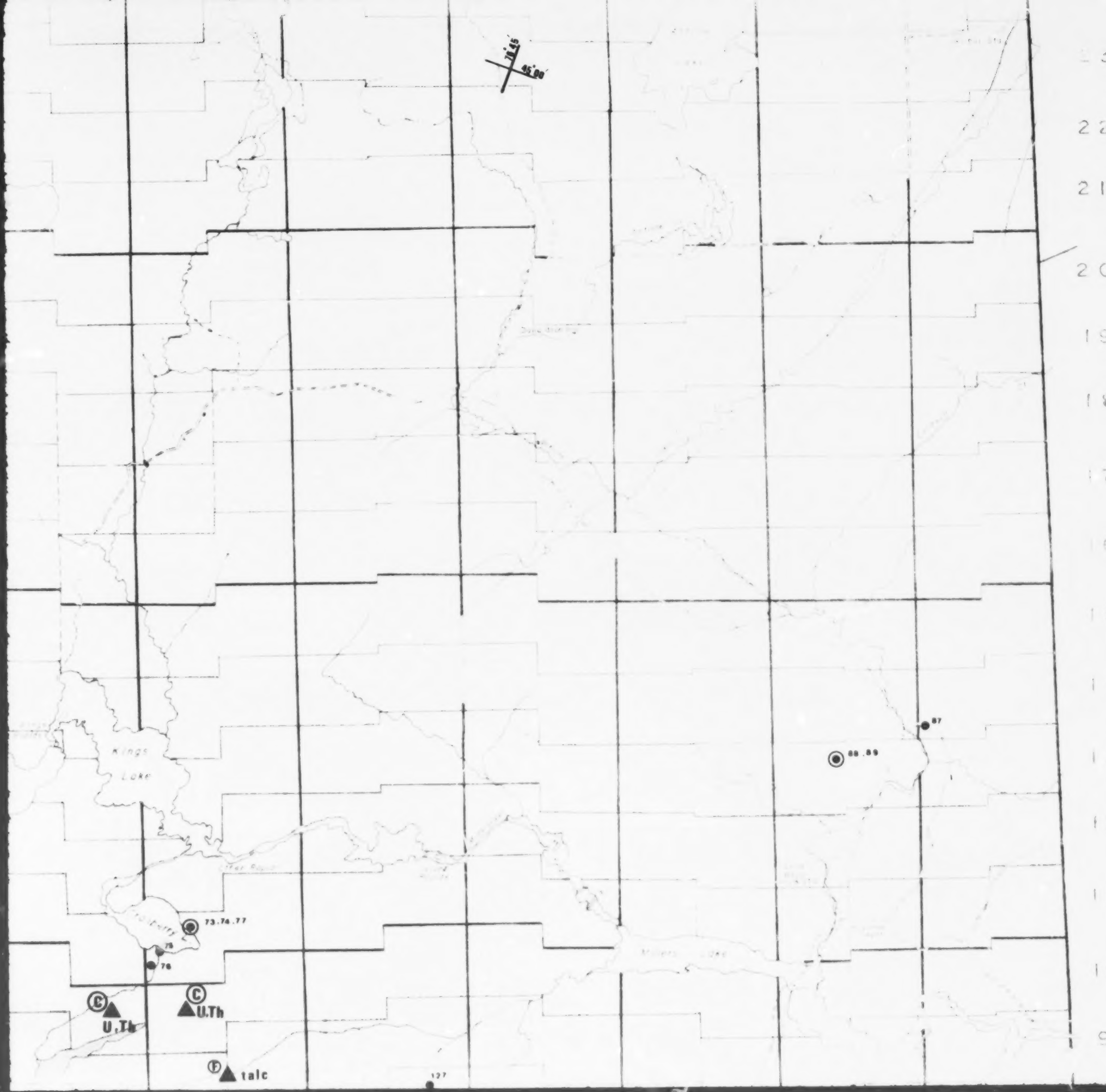
MINERAL OCCURRENCES

- ☒  Mineral occurrence at surface, with reference letter
- ☐  Mineral occurrence with shaft, depth given with reference letter
- ☐  Mineral occurrence reported but exact location uncertain, with reference letter
- ☐  Mineralized Float with reference letter
- ☐ 

DRILL HOLES

- | | | |
|-------------------------------------|---|---|
| ☒ |  | Location of single drill hole, with reference number |
| ☒ |  | Location of closely spaced group of drill holes, with reference number |
| ☐ |  | Drill hole, exact location uncertain, with reference number. |
| ☐ |  | Property with underground drill holes in this general area, with reference number |





- ☒ Mineral occurrence at surface, with reference letter
- ☐ Mineral occurrence with shaft, depth given with reference letter
- ☐ Mineral occurrence reported but exact location uncertain, with reference letter
- ☐ Mineralized Float with reference letter
- ☐

DRILL HOLES

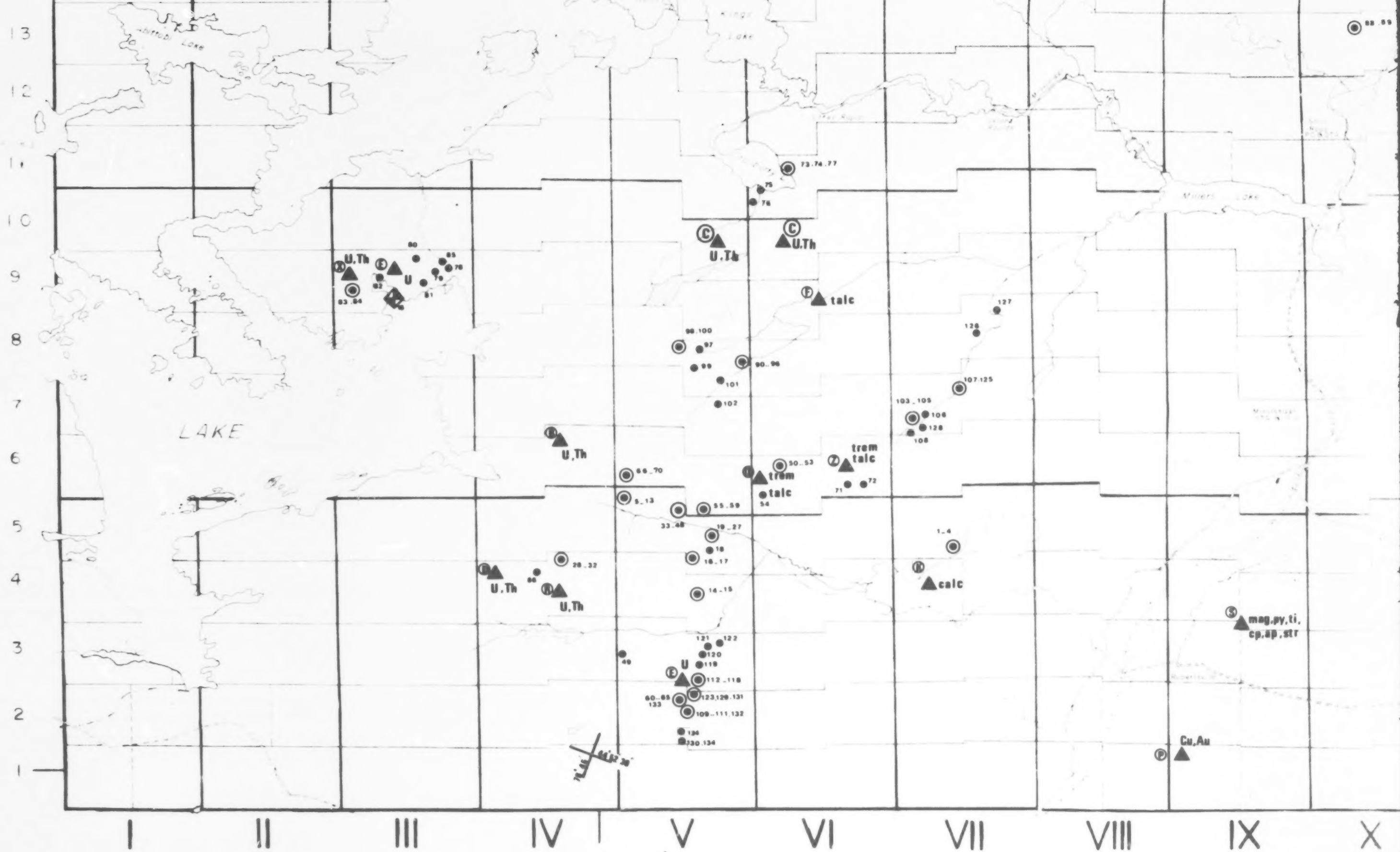
- ☒ Location of single drill hole, with reference number
- ☒ Location of closely spaced group of drill holes, with reference number
- ☐ Drill hole, exact location uncertain, with reference number
- ☐ Property with underground drill holes in this general area, with reference number
- ☐ Property with drill holes which have not been plotted on map, with reference number
- ☐ Reverse Circulation Drill Hole; Churn drilling, with reference number
- ☐

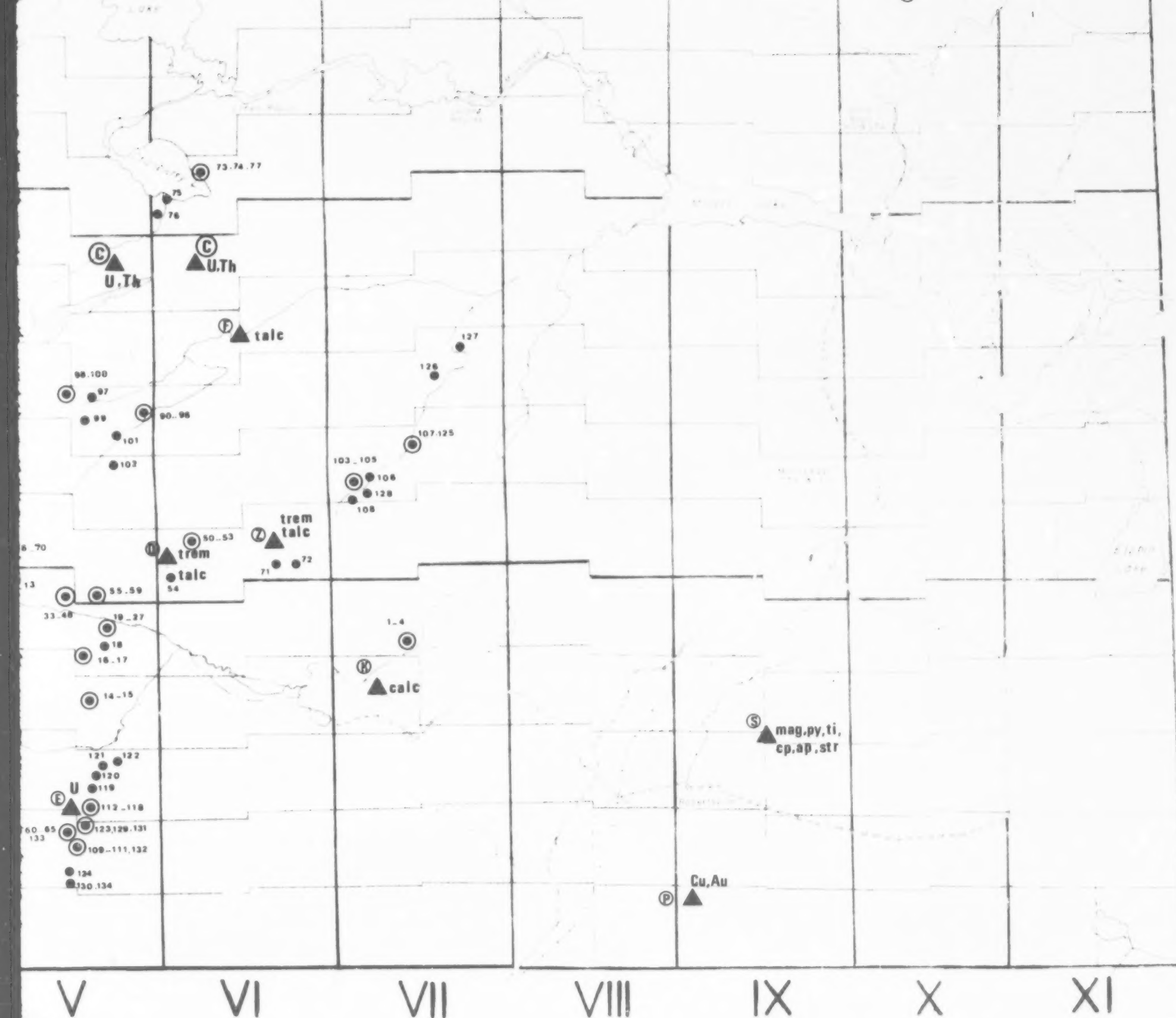
GEOCHEMICAL AND GEOCHRONOLOGICAL DATA

- ☒ Geochemical sample site, with reference number
- ☐ Area of geochemical sampling, with reference number
- ☐ Age dating material sampling site, with reference number
- ☐

GEOPHYSICAL ANOMALIES

- ☐ Airborne Magnetometer Anomaly
- ☐ Airborne Electromagnetometer Anomaly
Length of anomaly along flight line
- ☐ Airborne Electromagnetometer Anomaly
Location of anomaly along flight line
- ☐ Airborne Electromagnetometer Anomaly
Conductor Axis: definite, probable, possible
- ☐ Airborne Radiometric Anomaly
- ☐ Ground Magnetometer Anomaly
- ☐ Ground Electromagnetometer Anomaly
(VL - Vertical Loop; HL - Horizontal Loop;
VLF - Very low freq; Turam; JEM -
Crone EM - 16)





GEOPHYSICAL ANOMALIES

- ☐ Airborne Magnetometer Anomaly
- ☐ Airborne Electromagnetometer Anomaly
Length of anomaly along flight line
- ☐ Airborne Electromagnetometer Anomaly.
Location of anomaly along flight line
- ☐ Airborne Electromagnetometer Anomaly
Conductor Axis: definite, probable, possible
- ☐ Airborne Radiometric Anomaly
- ☐ Ground Magnetometer Anomaly
- ☐ Ground Electromagnetometer Anomaly
(VL - Vertical Loop; HL - Horizontal Loop;
VLF - Very low freq; Turam; JEM -
Crone EM - 16)
- ☐ Ground Radiometric Anomaly
- ☐ Induced Polarization Anomaly
- ☐ Self Potential Anomaly
- ☐ Audio-frequency magnetometer anomaly
(total intensity)
- ☐ Resistivity Anomaly
- ☐ Gravity Anomaly
- ☐

MISCELLANEOUS DATA

- ☐ Trenching, pit
- ☐ Adit
- ☐ Open pit
- ☐
- ☐ Rock quarry
- ☐ Sand and/or gravel pit
- ☐

NOTE: Consult the text that accompanies this map for pertinent lists of data, references, and abbreviations.